Foreword

It is with great pleasure and honor that I present the proceedings of **MIDENT 2025**, a premier conference that exemplifies the dynamic evolution of dentistry through **sustainability, innovation, and artificial intelligence**. As Chairperson, I am delighted to witness the exchange of groundbreaking ideas, research, and technological advancements that are reshaping the landscape of modern dentistry.

The dental profession is undergoing rapid transformation, driven by **cutting-edge technologies and eco-friendly practices** that are redefining both patient care and professional standards. This year's theme, **"Sustainability, Innovations, and the Impact of AI in Dentistry,"** reflects our commitment to fostering meaningful discussions, interdisciplinary collaborations, and forward-thinking solutions that will shape the future of oral healthcare.

These proceedings compile a wealth of knowledge contributed by **renowned experts, thought leaders, and researchers** from around the world. Covering topics from **AI-driven healthcare solutions to sustainable dentistry and innovative clinical practices**, this collection serves as a valuable resource for professionals, academicians, and students seeking to stay at the forefront of dental advancements.

I encourage all readers to explore these research findings, engage with new perspectives, and apply these insights to advance the field. May this compilation not only serve as an academic reference but also as an inspiration for future innovations and sustainable solutions in dentistry.

I extend my sincere gratitude to all authors, presenters, and participants for their invaluable contributions. Your dedication and commitment to excellence continue to drive the profession forward.

Thank you for being a part of **MIDENT 2025**. I look forward to the impact this research will have on shaping the future of dentistry.

Warm regards,
Dr. Anna Rani Kanagarajah
Chairperson, MIDENT 2025

TABLE OF CONTENTS

15	Muhammad Amir Danish	Nyx Low Yan Shuen, Teshvinder Kaur Sandhu, Dato Dr Wan Mahadzir Bin Wan Mustafa	Faculty of Dentistry, MAHSA University	The Dilaceration Incidence in the Malaysian Population in MAHSA Dental Clinic	19
16	Sek Xin Jie	Jaipreet Kaur A/P Davinder Singh, Nurhani Nadirah binti Mohd Lotfi, Geetha Nalairndra	Faculty of Dentistry, MAHSA University	Estimated Prevalence of Dental Anxiety Among Staff and Students from Different Faculties	20
17	Jafar Abdulla Mohamed Usman	Han En, Lim Sheng Bei, Nur Afina binti Rosnan	Faculty of Dentistry, MAHSA University	Perception of Pneumoconiosis Among Dental Technology Students Studying in Malaysia	21
18	Ain Najwa Binti Mohd Hakimi	Kam Kai Rou, Siew Winnie, Deepak Pateel, Muhammad Khan Asif	Faculty of Dentistry, MAHSA University	CBCT Analysis of Root and Root Canal Morphology in Malaysians' Lower First Molars	22
19	Chai Kai Wen	Chamkha Rawan, Marni Shafiya Yusof, Aparnna Dhayanidhi	Faculty of Dentistry, MAHSA University	Parental Awareness on Orthodontic Treatment and Quality of Life	23

01 A STUDY ON PRESCRIPTION WRITING AND KNOWLEDGE AMONG DENTAL STUDENTS

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Introduction:

Writing accurate prescriptions is vital for dental practitioners to ensure safe, effective patient care. However, errors remain a concern, often due to gaps in knowledge and training. This study evaluates the prescription-writing skills and knowledge of final-year dental students at MAHSA University, identifying common errors and areas for improvement.

Materials and Methods:

A cross-sectional study was conducted among 48 final-year dental undergraduates at MAHSA University. Section A involved writing a prescription for a given clinical scenario (35 marks). Section B comprised a validated 5-item MCQ questionnaire (5 marks) assessing prescription knowledge and error awareness. Scores were converted to percentages and analyzed using SPSS.

Results:

The mean total score was 87.4%, with 89.6% of students achieving an "EXCELLENT" rating and 10.4% earning a "GOOD" rating. In Section A, the most common error made by students regarding patient's details was the date of prescription (n=54.2%), while the least common error was the Rx symbol (n=22.9%). Regarding drug details, the most frequent mistake was in the unit dose (n=68.8%), while errors in duration, drug name, and dispense quantity were the least common, each at 2.1%. In Section B, the majority of students lost points on Q1 about the timing of drug administration (n=66.7%), while performance on Q2 and Q5 regarding prescription abbreviations and contraindication of drugs in pregnancy respectively, was strong, with only 2.1% of students making errors in each.

Conclusion:

Despite strong overall performance, critical prescription errors highlight opportunities to enhance students' prescribing skills.

Keywords: *Prescription; Writing, Knowledge; Dental students; Medication safety; Prescribing error.*

02 IN VIVO COMPARISON OF TEETH WHITENING AND TOOTH COLOUR CHANGES

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Introduction:

In today's day and age, aesthetics is an imperative factor that contributes to an individual's personality. Amongst the various factors of dentition that can contribute to good esthetics, tooth shade plays a significant role and therefore discoloration is a cause of great concern to a large number of subjects. In this regard, the present study aims to compare the efficacy of two teeth whitening techniques, chemically activated (Opalescent Boost) and laser activated (S1 PIOON lasers) technique.

Materials & Methods:

In this clinical study, 12 patients (72 teeth) were randomly allocated to one of two groups; Group 1 (Opalescent Boost) and Group 2 (S1 Pioon Lasers). In each patient, the six maxillary anterior teeth were selected for performing teeth whitening procedures following which tooth colour changes were recorded using the intra-oral scanner (3Shape TRIOS). Esthetic self-perception in patients before and after treatment was assessed using the PIDAQ questionnaire.

Results:

The chemically activated group demonstrated significantly better results compared to the laser-activated group both immediately after the procedure and at one-month post-operative, as confirmed by the Mann-Whitney U test. However, the laser group exhibited significantly better sustainability in shade, maintaining improved color at one month. Additionally, PIDAQ values showed significant improvement after the procedure in both groups as assessed by the Wilcoxon signed-rank test.

Conclusion:

The chemically activated whitening method demonstrated more immediate improvements, whereas the laser activated method showed superior shade sustainability over time. Both treatment modalities resulted in significant post-treatment improvements in patient-reported outcomes as measured by the PIDAQ scores.

Keywords: *Teeth whitening; Intra-oral scanners; Aesthetics; Lasers; Chemical bleaching; Psychosocial impact.*

03 EXPLORING BIOSURFACTANTS FOR SUSTAINABLE AND EFFECTIVE TOOTH WHITENING

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Introduction:

Tooth discolouration remains a significant aesthetic concern, driving demand for effective and sustainable whitening treatments. Traditional whitening agents, carbamide peroxide (oxidation) and sodium metabisulfite (reduction) are widely used with surfactants to improve stain penetration and surface interaction. Growing environmental awareness drives the demand for biosurfactants that offer eco-friendly and biocompatible alternatives to synthetic surfactants.

Materials & Methods:

This study evaluates the effectiveness of selected industrial surfactants and biosurfactants in whitening by evaluating their interaction with tannic acid. At a concentration of 0.1%, their reaction with tannic acid was monitored using UV-Vis spectrophotometry over a 20-minute period. Further analysis was conducted on extracted teeth (n = 36) stained with 0.47 M tannic acid, cleaned, and treated with whitening agents. Whitening efficacy was assessed using colorimetric analysis (VitaShade spectrophotometer) measuring L^*, a^*, and b^* values, with total colour change (ΔE^*ab) calculated. Statistical analysis was performed using one-way ANOVA ($\alpha = 0.05$).

Results:

Among the surfactants tested, biosurfactant #1 significantly enhanced whitening efficacy, reducing absorbance by 61.9% when combined with carbamide peroxide. In contrast, its combination with sodium metabisulfite did not yield statistically significant differences. Further evaluation of extracted teeth confirmed the enhanced whitening potential of biosurfactant #1 in conjunction with the use of carbamide peroxide.

Conclusion:

This study highlights the great potential of biosurfactants in improving tooth-whitening efficacy. Further research is needed for surfactant concentration optimization, evaluating long-term effects, and exploring the broader application of biosurfactants for innovative and eco-friendly advancements in aesthetic dentistry.

Keywords: *Tooth Whitening; Surfactants; Biosurfactants; Propylene Glycol; Whitening Efficacy; Aesthetic Dentistry.*

04 MANAGING DENTAL ANXIETY IN STRONG-WILLED PEDIATRIC PATIENTS

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Introduction:

Dental anxiety in children often leads to uncooperative behavior, making treatment difficult. This study compares the effectiveness of thaumaturgic techniques—magic tricks and visual illusions—to conventional behavior management methods in reducing pediatric dental anxiety.

Materials & Methods:

A case-control study was conducted at MAHSA University's Year 4 Student Dental Clinic with 52 children aged 2–13 years. Participants were divided into three age groups (2–7, 7–11, 11–13) and four intervention groups: (1) Control, (2) Thumb and Light Trick, (3) Magic Water Coloring Book, and (4) Magic Trick. Pre- and post-treatment anxiety levels were measured using an anxiety rating scale. Statistical analysis was performed using paired t-tests and one-way ANOVA.

Results:

Thaumaturgic techniques significantly reduced anxiety scores compared to conventional methods, with the greatest effect observed in younger children (2–7 years). These techniques effectively engaged children, improving cooperation during dental procedures.

Conclusion:

Magic-based distraction methods are promising for managing dental anxiety in strong-willed children. Incorporating engaging, interactive elements enhances patient experience and treatment outcomes. Further research is recommended to assess long-term effectiveness.

Keywords*: Pediatric dentistry; Dental anxiety; Behavior management; Thaumaturgic techniques; Magic tricks.*

05 DENTAL AGE ASSESSMENT USING LOWER THIRD MOLAR ROOT PULP VISIBILITY

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Introduction:

Forensic age estimation has become crucially important, particularly in accidents where identification of deceased individuals is required. Human dentition being resilient under high chemical and physical load, can provide a wealth of information. Therefore, the aim of this study was to validate the reliability of Olze et al's RPV assessment in the Malaysian population.

Materials & Methods:

This study examined 200 panoramic radiographs of Malaysian individuals aged 16–35 years. The RPV of the lower third molars was classified into four stages, following Olze et al.'s criteria. Kruskal Wallis test was done to determine the relationship between chronological age and RPV stages, while Pearson's Chi Square was done to determine the relationship between races and RPV stages, as well as between genders and RPV stages. Cohen's kappa test was then used to assess inter-rater reliability.

Results:

The relationship between age and RPV had statistical significance ($p < 0.001$). Both races and genders had no significant relationship with RPV. Preliminary findings suggested a progressive reduction in root pulp visibility with age. Stage 0 first appeared at 16 years. The earliest appearance of stage 1 happened at 20 years. Stage 2 was first attained at 21 years and stage 3 at 33 years.

Conclusion:

It was proven effective that RPV is a reliable forensic age estimation method for Malaysians, with individuals under 18 predominantly exhibiting stage 0, stages 1-3 are indicative of individuals aged 18 and above. Stages 2 and 3 are proved to be a suitable age marker for determining an age over 21 years.

Keywords: *Age estimation; Forensic odontology; Root pulp visibility; Panoramic radiography; Third molars; Malaysian population*

06 PERCEPTION OF DENTAL AESTHETICS AMONG YOUNG ADULTS IN SELANGOR, MALAYSIA

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Introduction:

Perception of dental aesthetic varies depending on region, race, and individualistic preference. Malaysia is a multiethnic country with a diverse population with a possible variation in the perception of aesthetic in different part of the country. A smile always represents a person's facial attractiveness and plays an important role in social connections. Hence, this study aims to explore the effects of dental aesthetics on young adults in Selangor, focusing on dental self-confidence, social and psychological impacts, and aesthetic concerns.

Materials & Methods:

A descriptive study was performed among young adults aged 18 to 35 years in three different areas of Selangor; urban, suburban, and rural. The study data were collected using a self-administered PIDAQ questionnaire consisting of three sections comprising of evaluation of self-perception of occlusion which include awareness, satisfaction, and attitudes. The second section covers the impacts of dental aesthetics, comprising the subscales of Dental Self-Confidence, Social and Psychological Impact, and Aesthetic Concern. The third section includes the IOTN Aesthetic component.

Results:

This study involved 343 participants. It was observed that the majority of young adults in urban areas are conscious of their misaligned teeth and exhibit higher dental self-confidence compared to those from suburban and rural areas. However, they faced fewer social consequences but endured greater psychological effects as urban areas often place a strong emphasis on beauty standards and hold high expectations for their facial appearance.

Conclusion:

Young adults in Selangor are aware of dental aesthetics and concerned about their smiles. Their self-confidence and social attitudes are also influenced by their perception of their smile.

Keywords: *Dental Aesthetics; Perception; Social effects; Psychological effects; Dental Self-Confidence; Aesthetic Concern.*

07 CORRELATION BETWEEN DENTAL CARIES AND ORAL HYGIENE STATUS – A CROSS-SECTIONAL STUDY

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Introduction:

Dental caries remains one of the most prevalent oral health concerns worldwide, with oral hygiene supposed to play a crucial role in its prevention. Understanding the correlation between oral hygiene status and caries incidence may help refine preventive strategies in clinical practice.

Materials & Methods:

This cross-sectional study included patients attending MAHSA dental clinics. Caries status was assessed using the Decayed, Missing, and Filled Teeth (DMFT) index, while oral hygiene was evaluated using the Oral Hygiene Index-Simplified (OHI-S)index. Statistical analysis was performed to determine the correlation between oral hygiene status and dental caries prevalence.

Results:

The findings revealed there is a significant correlation between oral hygiene status and dental caries. The age group was significantly correlated with both oral hygiene status and dental caries. Gender showed a significant correlation with oral hygiene status whereas education level showed a significant correlation with dental caries only. Snack frequency was not correlated with either oral hygiene status or dental caries. Brushing habits were significantly correlated with oral hygiene status but not with dental caries.

Conclusion:

While oral hygiene plays a critical role in caries prevention, this study underscores the importance of a systematic approach to devise or modify strategies to decrease its incidence. Dietary habits, saliva composition, and fluoride exposure significantly impact caries risk, warranting an integrated preventive strategy. Future research should focus on individualized caries risk assessment incorporating these parameters.

Keywords: *Dental caries; Oral hygiene status; DMFT; OHI-S; Dietary Habits.*

08 DENTAL ANXIETY IN PATIENTS: STUDENT VS. PRIVATE DENTAL CLINICS

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Introduction:

Dental anxiety can impact oral health by neglecting dental visits. This study assesses the prevalence and severity of dental anxiety between patients attending student dental clinics and private dental clinics and investigates the sociodemographic factors influencing dental anxiety levels.

Materials & Methods:

A validated Index of Dental Anxiety and Fear Scale (IDAF-4C+) questionnaires were distributed to patients attending Mahsa University's student dental clinics and private dental clinics (n=300) via stratified random sampling. Demographic characteristics were collected. A cut point of 2.5 in the average score for the dental anxiety and fear (IDAF-4C) module was set to indicate the presence of dental anxiety. Descriptive statistics assessed prevalence, while Spearman correlation analysed associations towards related dental stimuli.

Results:

This study found that dental anxiety was more prevalent among patients in private dental clinics (21.3%) compared to those in student dental clinics (16.7%). The strongest stimuli correlated with dental anxiety were 'Feeling embarrassed or ashamed' ($r=0.437$), followed by 'Feeling sick, queasy, or disgusted' ($r=0.385$). Female patients reported a higher prevalence of dental anxiety (21.7%) than male patients (14.7%). Dental anxiety is most prevalent in patients aged 18- 30 (20.5%), followed by 31-44 (18.5%) and 45–60 (16.9%).

Conclusion:

Dental anxiety is prevalent in both settings, with a higher occurrence in private dental clinics. Factors such as embarrassment and disgust strongly influence anxiety levels. These findings highlight the need for targeted strategies, including patient education and anxiety-reducing techniques, to improve the overall dental experience and encourage regular dental visits.

Keywords: *Dental Anxiety; Dental Fear; Dental Phobia; Dental Students; Student Dental Clinics.*

09 ETHNIC DIFFERENCES OF ROOT-CROWN RATIO IN PERMANENT DENTITION AMONG MALAYSIANS

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Introduction:

Ratio between a tooth root and its crown is an essential diagnostic parameter that determines treatment options. An unfavorable root-crown (R/C) ratio may have an adverse effect on the treatment prognosis. The aims were to test the accuracy of a simple measurement method to determine R/C ratios of permanent teeth and to assess their relationship to gender and ethnicity among the Malaysian population.

Materials & Methods:

A non-interventional cross-sectional study of 180 patients from three ethnic groups (60 Chinese, 60 Malay, 60 Indian) was undertaken. The crown height and root length of permanent teeth were measured on digital panoramic radiographs using modified Lind's method. All data were analyzed using SPSS. Gender differences were evaluated using an independent t-test, while ethnic differences were compared using a one-way ANOVA.

Results:

The mean R/C ratios varied from 1.50–1.91 for the maxillary teeth and from 1.54–1.90 for the mandibular teeth. Chinese patients had the highest mean R/C ratios while Indian patients had the lowest mean R/C ratios. Significant differences in the R/C ratios were also observed for the upper lateral incisors, and upper first and second molars among the three ethnic groups. However, no significant differences were shown among gender.

Conclusion:

Ethnicity thus plays a significant role in influencing the R/C ratio in permanent teeth. Therefore, to aid in diagnosis and treatment planning, ethnic group-specific reference values and baseline data of root crown ratio should be taken into account. The study shows that Modified Lind's method is an easier and simpler tool to measure the R/C ratio from digital radiographs accurately.

Keywords: *Ethnic differences; Permanent dentition; Radiographic evaluation; Root-crown ratios; Prognosis of teeth.*

10 THE RELATIONSHIP BETWEEN ORAL TORI AND OBSTRUCTIVE SLEEP APNEA

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Introduction:

Obstructive sleep apnea (OSA) is a sleep-related breathing disorder caused by upper airway obstruction that leads to daytime sleepiness. Risk factors include obesity, retrognathia, and palatal or mandibular tori, which reduce oral space and worsen airway collapse. Dentists play a key role in identifying OSA risk through routine clinical exams and questionnaires like STOP-BANG and Epworth Sleepiness Scale (ESS). Treatment includes lifestyle changes, continuous positive airway pressure (CPAP), and oral appliances. This study aims to determine the relationship between tori and OSA while examining other associated oropharyngeal factors.

Materials & Methods:

A total of 140 participants have been chosen, 70 with torus and 70 without torus(control). STOP-BANG questionnaire was used to screen the risk of OSA while assessing other related oropharyngeal factors and physical traits of the patient.

Results:

The results were obtained involving 100 participants (50 with torus, 50 without) and examined factors related to obstructive sleep apnea (OSA) risk. No significant relationship was found between OSA risk and torus presence, occlusion, or Mallampati score. However, parafunctional habits, gender, BMI, and age showed positive associations with OSA risk ($p=0.020$, $p=0.005$, $p=0.001$, and $p=0.001$, respectively). These findings highlight specific factors that may contribute to OSA risk while ruling out others.

Conclusion:

This study aims to determine the relationship between oral tori and OSA, and the connections to oropharyngeal factors; parafunctional habits, occlusion, Mallampati score, and also gender, BMI, and age of the patient. Multiple linear equation was used to analyze how these factors are related to OSA.

Keywords: *Oral torus; Obstructive sleep apnea; Oropharyngeal factors; STOP-BANG; Body-mass index. .*

11 NATURE'S HEALING: MALAYSIANS' VIEWS ON HERBS IN MEDICINE AND DENTISTRY

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Introduction:

Plants appreciated for their medicinal, savoury, or aromatic qualities are considered herbs that are widely grown in Malaysian home gardens. Popular garden herbs include garlic, ginger, aloe vera, turmeric, and lemongrass. This study identified the commonly used herbs among Malaysian adults, determined their benefits and applications in medicine and dentistry, and assessed whether they still view the herbs as viable alternatives to modern medicine.

Materials & Methods:

A cross-sectional study was conducted among healthy adults aged 19–60 in West Malaysia. A self-administered questionnaire from a sample size of 424 was calculated using RaoSoft and statistically analyzed with the SPSS version 29.

Results:

The use of garden herbs was higher among women (66.6%) and Malays (55.8%), with younger adults (19-29 years) being the most frequent users (56.35%). This study revealed the most commonly used herbs were ginger (89.7%), garlic (68.5%), and aloe vera (65.1%), with reasons for use including accessibility (56.0%), advice (45.7%), and low-cost (44.0%). They perceived that the herbs were used to treat common health issues like bloating (80.3%), joint pain (51.0%), and hypertension (26.2%). However, a small percentage reported use for swelling gums (12.5%), reduced plaque (4.8%), and toothache (3.6%).

Conclusion:

The study concludes that garden herbs remain a significant part of health and dental care in Malaysia. Integrating traditional herbal knowledge with modern medicine could offer affordable, culturally relevant treatment options. Future research should focus on evaluating the efficacy of these herbs in dentistry and exploring ways to bridge traditional and modern medical practices.

Keywords: *Malaysians; Herbs; Usage; Benefits; Medicine..*

12 MUSCULOSKELETAL DISORDERS AMONG DENTAL PROFESSIONALS IN MALAYSIA

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Introduction:

Musculoskeletal disorders (MSD) are highly prevalent among dental professionals due to prolonged static postures and poor ergonomic practices. This study examines the prevalence of MSD among dental professionals in Malaysia, identifies key ergonomic risk factors, and assesses the impact of ergonomic tools usage on MSD.

Materials & Methods:

A cross-sectional study was conducted among 459 dental professionals. Data on demographic variables, ergonomic practices, and MSD prevalence were collected. Chi-square tests were performed to analyze associations between ergonomic factors and MSD occurrence.

Results:

Participants had a 67% prevalence of MSD, indicating a persistent occupational health hazard. Frequent neck torsion/flexion ($p < 0.001$), poor instrument accessibility ($p < 0.001$), poor sitting posture ($p < 0.001$), and lack of post-work stretching exercises ($p = 0.046$) were among the significant risk variables for MSD that were found by chi-square analysis. However, the use of ergonomic tools, including magnifying loupes, did not significantly correlate with MSD ($p = 0.179$), indicating that workplace ergonomics and posture are of greater significance than tool utilisation alone.

Conclusion:

MSD remains a critical issue among dental professionals. In order to reduce the risk of MSDs, the results highlight the necessity of better posture instruction, ergonomic workstation adjustments, and frequent stretching exercises. Unless paired with appropriate ergonomic practices, using ergonomic instruments like loupes alone might not be enough to avoid MSD.

Keywords: *Musculoskeletal Disorder (MSD); Ergonomics; Ergonomic tools; Dentists; Stretching exercises.*

13 AWARENESS OF PERIODONTITIS AMONG MAHSA UNIVERSITY HEALTH SCIENCES STUDENTS

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Introduction:

Periodontitis is a multifactorial disease caused by poor oral hygiene, leading to plaque accumulation, gum inflammation, and bone damage. If untreated, it can result in tooth loss. Though irreversible, it is manageable with proper oral care. Severe cases may become life-threatening if bacteria spread to the bloodstream, affecting the cardiovascular system. This study aims to evaluate the awareness of periodontitis among MAHSA University students, identify the level of awareness of factors leading to periodontitis, and compare awareness across faculties.

Materials & Method:

This research utilized a quantitative approach by gathering data through questionnaires from MAHSA University Health Science students, excluding those from the Faculty of Dentistry. A total of 371 questionnaires were collected via Google Forms. The data collected through the surveys were analyzed using Statistical Package for the Social Sciences (SPSS) software.

Results:

A cross-sectional study was conducted among MAHSA University health sciences students. This study reveals that the majority of students at MAHSA University have moderate awareness regarding both periodontitis and the factors affecting the occurrence of periodontitis. The One-Way ANOVA test shows that the mean awareness level does not differ significantly among faculties ($p = 0.558 > 0.05$). Therefore, it suggests that the awareness levels are relatively similar, and any differences are not statistically significant.

Conclusion:

In conclusion, the findings indicate that MAHSA University students exhibit a moderate level of awareness regarding periodontitis. This is primarily attributed to insufficient knowledge about oral health. Enhancing educational initiatives and promoting oral health literacy are essential to improve awareness and encourage preventive practices among students.

Keywords: *Periodontitis; Awareness; Oral health; Factors of periodontitis; Oral hygiene; Dental care.*

14 ORAL HEALTH KNOWLEDGE, ATTITUDE, AND PRACTICE AMONG PHARMACY STUDENTS

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Introduction:

Oral health is a crucial factor in community well-being, yet gaps in dental care access persist in Malaysia due to financial and resource constraints. As accessible and trusted healthcare providers, pharmacists can play a pivotal role in bridging these gaps by promoting oral health awareness and guiding patients toward proper dental care.

Materials & Methods:

A cross-sectional study was conducted among Bachelor of Pharmacy undergraduate students of two local universities in Malaysia, namely MAHSA University and Universiti Malaya, utilizing validated questionnaires within a pre-and post-intervention study design. The sample size, calculated using Raosoft software, consisted of 193 participants, equally distributed between two institutions. Data analysis was performed using IBM SPSS Version 27.

Results:

The study assessed participants' knowledge, attitude, and practice (KAP) before and after the intervention. A paired-sample t-test revealed a statistically significant improvement in KAP within each university ($p<0.05$). However, when comparing KAP results between the two universities, no significant differences were found ($p>0.05$ for all parameters). This suggests that, despite being from different academic institutions, the students exhibited comparable levels of knowledge, and similar attitudes and followed similar practices related to the subject matter under investigation.

Conclusion:

In conclusion, the intervention significantly improved oral health KAP among pharmacy students, with no significant differences observed between the two universities. This highlights a consistently positive impact and emphasises the importance of pharmacy students acquiring basic oral health KAP to better promote oral health awareness.

Keywords: *Pharmacy; Oral Health; Knowledge Attitude Practice; Awareness; Promotional; Intervention.*

15 THE DILACERATION INCIDENCE IN MALAYSIAN POPULATION IN THE MAHSA DENTAL CLINIC

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Introduction:

Root dilaceration refers to an abrupt curvature of 20 degrees or more of the apical part along the long axis of the tooth. Our study aims to investigate the incidence of dilaceration of Malaysians in the MAHSA Dental Clinic.

Materials & Methods:

A retrospective cohort study was conducted using pre-existing panoramic data from the MAHSA Dental Clinic. 450 x-rays were collected from the years 2023-2022 for Malaysians above the age of 18.

Results:

198 out of 450 samples analyzed had dilaceration, which is 44% of the population. 396 out of 12725 teeth have dilaceration with the incidence being 3.11%. The tooth with the highest incidence is tooth 38 (16.04%). There is no association between gender and dilaceration (p-value= 0.124). Females have a higher incidence of dilaceration (47.3%). There is no association between ethnicity and dilaceration (p-value = 0.172). Malays have the highest incidence of dilaceration (48.8%).

Conclusion:

44% of the population with 3.11% of teeth investigated have dilaceration. The incidence of dilaceration in the Malaysian population has no association with gender or ethnicity, with tooth 38 being the highest incidence.

Keywords: *Dilaceration; Malaysian; Incidence; Gender; Ethnicity; Teeth.*

16 ESTIMATED PREVALENCE OF DENTAL ANXIETY AMONG STAFF AND STUDENTS FROM DIFFERENT FACULTIES

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Introduction:

Every individual yearns for a good quality of life, which is influenced by good oral health., However, certain individuals may face an obstacle such as dental anxiety. Dental anxiety is defined as fear, anxiety, or stress that is related to dentists and the dental setting. It may arise due to previous dental experience, word of mouth, or lack of trust in the dentist. This study aims to identify factors triggering dental anxiety among MAHSA University staff and students, aiding dentists in managing anxious patients effectively.

Materials & Methods:

A cross-sectional study was conducted among staff and students of MAHSA University, Bandar Saujana Putra campus. The study population included Year 1 and 2 dental students, business degree students, and staff from the dental and business faculties. A total sample size of 251 was determined using a convenience sampling method. Data analysis was performed using IBM SPSS version 29, with One-Way ANOVA applied for statistical comparisons.

Results:

The study revealed that dental anxiety was highest among individuals aged 31–45 years, with females exhibiting greater anxiety levels. Degree holders reported higher anxiety, while business faculty staff showed more anxiety than dental faculty staff. Additionally, dental students experienced more anxiety than business students. However, 75% of respondents reported no or minimal anxiety during dental treatment.

Conclusion:

Dental anxiety is more prevalent among business faculty staff and dental students. Identifying factors that contribute to dental anxiety is crucial in developing strategies to alleviate patient distress and improve their dental experience.

Keywords: *Dental anxiety; Oral health; Business faculty; Dental faculty; University students.*

17 PERCEPTION OF PNEUMOCONIOSIS AMONG DENTAL TECHNOLOGY STUDENTS STUDYING IN MALAYSIA

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Introduction:

Pneumoconiosis is among the most common occupational diseases in the world, caused by the inhalation of organic or inorganic airborne dust and fibers Dental technology students fabricate prostheses for the treatment of damaged or maligned teeth by performing complex laboratory skills in designing, constructing, and repairing dental prostheses such as bridges, crowns, dentures, orthodontic appliances, mouth guards and other dental fixtures. This makes them vulnerable to various respiratory diseases due to their frequent exposure and inhalation of dust particles in the laboratory.

Objectives: Analyse the perception of pneumoconiosis among dental technology students studying in Malaysia.

Materials and methods:

A cross-sectional survey was carried out among Year 2 and Year 3 dental technology students at MAHSA University. A structured questionnaire was distributed to evaluate student's perception regarding pneumoconiosis.

Results:

The Statistical Package for Social Sciences (SPSS) was used to code, tabulate, and analyze the data. The study findings revealed that 18(60%) of Year 2 students were unaware of pneumoconiosis compared to 5(45.5%) of Year 3 students. Despite these knowledge gaps, 38(92.7%) respondents agreed that they should be educated on occupational health risks, and 32(78%) expressed a willingness to learn more about pneumoconiosis.

Conclusion: This research highlights a significant lack of perception about pneumoconiosis among dental technology students.

Keywords: *Prosthetic Dentistry; Pneumoconiosis; Lung disease; Dental technician students; Occupational hazards.*

18 CBCT ANALYSIS OF ROOT AND ROOT CANAL MORPHOLOGY IN MALAYSIANS LOWER FIRST MOLARS

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Introduction:

The appropriate endodontic management of the permanent mandibular first molar is very critical for the maintenance of dental function. Thus, the knowledge of its root canal variations is crucial for successful endodontic treatment. The present study aims to evaluate the root canal and root morphology `of permanent mandibular first molars in the Malaysian population using Cone Beam Computed Tomography (CBCT).

Materials & Methods:

A total of 151 CBCT scans with fully formed apices and clear imaging were analyzed from a pool of 362 scans recorded at MAHSA University between January 2023 and October 2024. The number of roots, canals per root, and canal configurations were evaluated and classified according to the Ahmed root canal classification system.

Results:

Among the MFPM, 41.71% were two-rooted, and 11% were three-rooted. The most frequent canal configuration for mesial root is 2 (70.2%) followed by 2-1 (21.2%) and 1-2-1 (2.6%). However, in distal root canal, configuration 1 reported the highest (49%), followed by 18.5% in configuration 1-2 and 16.2% in configuration 1-2-1. The canal configurations are not correlated with the sex or ethnic group ($p>0.05$).

Conclusion:

In the study population, the most common anatomical configuration of the mandibular first molar was having two roots and 3 canals. Most of these teeth had two canals in the mesial root and one canal in the distal root.

Keywords: *CBCT; Mandibular first molar; Root canal morphology*; Mesial root; Distal root.

19 PARENTAL AWARENESS ON ORTHODONTIC TREATMENT AND QUALITY OF LIFE

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Introduction:

Orthodontic treatment improves oral health, aesthetics, and quality of life, especially for teenagers. Parental awareness of orthodontic treatment influences treatment decisions, yet misconceptions may delay care. This study explores parental awareness regarding orthodontic treatment and its correlation with teenager's quality of life. This study aims to assess parental knowledge and perceptions of orthodontic treatment and its impact on teenager's quality of life.

Materials & Methods:

A cross-sectional survey was conducted among parents of teenagers aged 13–17 years old. Data were collected through a structured questionnaire covering demographics, knowledge of orthodontic treatment, risks, treatment costs, and willingness to seek treatment. Pearson Chi-square test was used to correlate between willingness to do orthodontic treatment and the cost of the treatment.

Results:

All 227 distributed questionnaires were completed. Most parents (82.4%) were aware of orthodontic treatment, and (70.5%) had visited an orthodontist. A significant number (81.5%) had received professional advice about treatment for their child, and 69.6% had family members undergone orthodontic care. Nearly all parents (99.1%) believed that orthodontic treatment enhances a child's quality of life, and (98.2%) were willing to pursue treatment. Pearson Chi-square analysis revealed a significant relationship (p=0.004) between willingness to seek treatment and cost, indicating financial considerations as a key factor.

Conclusion:

Parental awareness of orthodontic treatment is relatively high, with a strong belief in its benefits in quality of life. However, financial constraints may influence decision-making. Increased educational efforts and financial support options could enhance access to orthodontic care.

Keywords: *Orthodontics; Quality of Life; Parental Awareness; Cross-sectional Study; Teenagers.*